

1 17. An apparatus for longitudinally cutting a moving
2 material web, in particular a paper or cardboard web or a plastic
3 or metal foil with one or more pairs of circular blades at least
4 one of which has a blade body that has a steel cutting edge, at
5 least a surface of the cutting edge being coated by means of a
6 plasma-aided method with foreign ions to a depth between 50 μm and
7 500 μm .

1 18. The web-cutting apparatus defined in claim 17
2 wherein the depth is between 100 μm and 200 μm .

3 19. The web-cutting apparatus defined in claim 17
4 wherein at least the cutting edge has a hardness of 800 HV to
5 1300 HV without impairing ductility.

1 20. The web-cutting apparatus defined in claim 19
2 wherein the hardness is between 900 HV and 1200 HV.

1 21. The web-cutting apparatus defined in claim 17
2 wherein at least the cutting edge is formed of a heat-treated
3 steel, a high-speed steel, or a tool steel.

1 22. The web-cutting apparatus defined in claim 17
2 wherein the entire blade body is formed of a heat-treated steel, a
3 high-speed steel, or a tool steel.

1 23. The web-cutting apparatus defined in claim 17
2 wherein the foreign ions are of nitrogen, carbon, molybdenum,
3 tungsten, and/or titanium.

1 24. The web-cutting apparatus defined in claim 23
2 wherein a portion molybdenum or tungsten ions in the foreign ions
3 is greater than a portion of titanium ions.

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Concluded